SELLING OUT:

HOW IMPRESSIONS OF MATERIALISM INFLUENCE THE EVALUATION OF CREATIVITY AND CREATIVE PERFORMANCE

By

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I investigate how impressions of materialism influence evaluations of creativity and creative performance. I posit that the misfit between the prototypical values espoused by highly creative individuals and materialism is manifested in the form of a stereotype that pegs materialistic individuals as being uncreative. I hypothesize that this stereotype leads to biases in the evaluation of creativity such that individuals who are perceived to be materialistic are evaluated to be less creative than their non-materialistic counterparts even when objective creativity is held constant. Additionally, I hypothesize that, similar to the effects of stereotype threat, increased self-perceptions of materialism can impair an individual's performance on a task that is described as being diagnostic of creativity. In a series of studies, I find evidence to support these hypotheses. I discuss the incompatible relationship between materialism and the creative prototype, moderating variables on this relationship, including

perspective taking, as well as the theoretical and practical implications of these findings on creative professionals and organizations.

BIOGRAPHICAL SKETCH

Sharon H. Kim is a candidate for Doctor of Philosophy degree in Organizational Behavior at the Cornell University School of Industrial and Labor Relations. She has completed coursework toward the Master in Industrial and Labor Relations at the Cornell University School of Industrial and Labor Relations and earned a Bachelor of Arts degree in Chinese Language and International Studies (East Asian Focus) from The Ohio State University. Her primary research interests include individual and group creativity in organizations.

I dedicate this dissertation to my mother, 이낭자, and to my husband, John Yen.

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INTRODUCTION

"Where there is money there is no art."
-William Blake

"Making money is art and working is art and good business is the best art."
-Andy Warhol

Selling out:

How impressions of materialism influence evaluations

of creativity and creative performance

Creativity is dependent on ideas that are both novel and useful (Amabile, 1996; Runco, 2004; Simonton, 1999; Sternberg, 1999). The value of creativity in organizations is becoming more salient to both researchers and to practitioners as they realize the potential for creative ideas to lead organizations in new and profitable directions by adapting and competing in an increasingly complex marketplace (Amabile, 1996; George, 2007; Hargadon & Sutton, 1997; Oldham, 2002; Gilson & Shalley, 2004). In fact, a recent survey of chief executives conducted by IBM's Institute for Business Value listed *creativity* as the most important leadership competency for the successful enterprise of the future (Kern, 2010). This response reflects a change in the way creativity is valued in organizations. Creativity is not only being viewed as a competitive advantage to organizations in terms of product

development and research, but its importance to effective leadership, general problem-solving and long-term strategy, among other areas, is also increasingly being recognized. In short, organizations are extremely interested in facilitating creativity because they realize the need for creative ideas in order to maximize profit.

As the economic value of creativity continues to increase (Amabile, 1996; Florida, 2002; Oldham, 2002), current trends suggest that the identification with money may become a more salient part of the creative work experience. It may be the case that individuals who identify as creative professionals, or people who add economic value through their creativity (Elsbach, 2009; Florida, 2002, pg. 68), find themselves representing dissonant professional identities as their work becomes more financially viable and they become more closely associated with the material side of business or with materialism than they initially imagined. Indeed, the identity of the prototypical businessperson is marked by materialism (Weber, 1958), a value that is antithetical to the creative prototype.

Despite the apparent importance of creativity to an organization's success, the ability to identify creative ideas remains a significant obstacle. One reason why this process can be difficult is that judgments of creativity often rely on an attribution process that is subject to error (Amabile, 1982; Elsbach & Kramer, 2003; Goncalo, Flynn & Kim, 2010; Kasof, 1995; Katz & Giacommelli, 1982, Sternberg, 1985). For instance, in his commentary, Kasof describes how judgments of creativity are driven in part by the evaluator's impressions of the person who generated the idea.

Therefore, general assumptions based on how creative individuals behave can ultimately shape evaluations of creativity, even independently of the objective quality of one's performance (Elsbach & Kramer, 2003; Goncalo et al., 2010; Kasof, 1995). Furthermore, Elsbach and Kramer's (2003) research showed that evaluators used physical and behavioral cues to match targets (in this case screenwriters) to specific creative and uncreative prototypes. Screenwriters who matched creative prototypes (e.g., those who displayed social awkwardness) were rated to be more creative than screenwriters who did not match these prototypes. In other words, the absence or presence of information about creative individuals based on prototypical expectations serves as cues to evaluators about how creative or uncreative the target is, objective creativity notwithstanding.

In addition, recent research has shown that narcissists, though not objectively more creative than non-narcissists, certainly believed that they were and were more adept at convincing others that their ideas were more creative (Goncalo et al., 2010). The over-confidence inherent to the narcissistic personality was perceived by evaluators as passion and enthusiasm about their ideas, characteristics that correspond to the prototypical creative person in this context (Elsbach & Kramer, 2003). This research suggests that sometimes people with mediocre ideas may be viewed as being more creative simply because of certain visible aspects of their personality. The ripple effects of these misattributions may be considerable in that mistaking style for substance could result in the regular selection of inferior ideas. The current research

considers the other side of this evaluative bias. It is possible that the expression of characteristics that are inconsistent with the creative prototype, such as materialism, may result in the failure to recognize those individuals with creative ideas resulting in similarly negative consequences.

The negative connotations associated with materialism are numerous (Richins & Dawson, 1992; Van Boven, Campbell & Gilovich, 2010) and may be particularly stigmatizing to creative professionals. In fact, the core values associated with the creative prototype, such as absorption in one's work and refusal to conform to social conventions (Barron & Harrington, 1981) and the values associated with materialism appear, on the surface, to be mutually exclusive. That is to suggest, to creatives, being materialistic can mean more than simply a conflict between action and principle. In such cases, materialism may also signify professional delegitimization to individuals who espouse or want to portray the prototypical values associated with creativity.

If an individual is perceived to care about material success more than anything else, including integrity of work, it may affect how others evaluate his or her creativity. Thus, this may trigger a bias against materialism in a creative context such that people who appear to fit into this category will be evaluated as being less creative. This is an important point because it suggests that individuals who are seen as materialistic may not be recognized despite having objectively creative ideas. Furthermore, as a person's ideas continue to be recognized by the organization as being both creative and profitable, the label of materialism may be increasingly

difficult to shed resulting in a no-win situation for both creative professionals and for the organizations that support them. If an individual is closely associated with money and/or materialism, even if that impression is false, it may impact how others judge his or her creativity. This may obscure the selection process of creative ideas, and it may also impact how creative professionals feel about their work.

Unlike many of the cognitive processes studied in organizations, creativity is one about which there exist many implicit theories or theories people hold about the causal nature and structure of behaviors (Sternberg, 1985). Previous research has shown that implicit theories of creativity are not only generally consistent across people, but also that they are used to guide judgments of others (Runco & Bahleda, 1986; Schneider & Blankmeyer, 1983; Sternberg, 1985; Wickes & Ward, 2006). These implicit theories form the basis of a prototype that results in a category of traits and behaviors that is expected of creative individuals and used to evaluate others (Kasof, 1995). In addition to confirming or refuting these theories empirically, it is equally important to consider how the salience of these existing shared assumptions influences the way creative ideas are conceived, identified and selected. In other words, understanding what creativity actually means to people may be a significant factor of influence on creativity in organizations.

In the present research, I argue that a conflict between the values of the creative prototype and the values of materialism is manifested in the form of a general stereotype that pegs materialistic individuals as being less creative regardless of

objective performance. I posit that this stereotype leads to biases in the evaluation of creativity and can also interfere with creativity when made salient in a performance context. The rest of this paper proceeds as follows. In two studies, I test the prediction that when a person is perceived to be materialistic, evaluations of his/her creativity will be discounted compared to a less materialistic other despite producing identical (creative) products. In a separate study, I examine the bias against materialism specific to the prototypical misfit with creative individuals by contrasting it with evaluations of materialistic targets in the context of being practical (i.e., creating a product designed to be useful). In a fourth study, I examine this bias with a modified manipulation of impressions of materialism that specifically references a choice between money and an intrinsically enjoyable offer. I also investigate how self-perceptions of materialism affect actual creative performance through psychological mechanisms similar to those at work under stereotype threat, or a psychological experience that occurs when individual group members become concerned that their performance may confirm a negative stereotype (Steele & Aronson, 1997). I posit that performance will be impaired when people's self-perceptions of materialism are higher and they are told that a task is diagnostic of creativity. I conclude by discussing the theoretical and practical implications of the proposed theory, limitations, as well as avenues for future research.

Prototype theory

Extant research has demonstrated the dominant influence of the prototype, or most central member of a given category, in the way individuals think about and remember objects (Rosch, 1978) and other people (Brewer, Dull & Lui, 1981; Cantor & Mischel, 1977; 1979). Rosch's (1978) cognitive theory of the organization of natural categories explains that natural categories are nested hierarchically and that these categories are represented cognitively as prototypes, or the exemplars that include attributes that are most representative of the objects in the category and least representative of those objects outside the category. Rosch illustrates the role of prototypes in natural categories using the classic example of the bird (1978). According to prototype theory, the robin is more prototypical of a bird than, for example, the penguin because it has feathers, a beak, and can fly. In terms of cognitive representation, the robin and the penguin do not have equal status as birds.

Application of this theory to social perception suggests that membership of an individual to a certain social category is assessed in terms of how similar that person is to the prototypic exemplar (Brewer et al., 1981). If an individual's characteristics and behavior do not match that of the categorical prototype, that individual is labeled accordingly, without membership to that category. In other words, when people view a target exhibiting a certain characteristic or behavior, they attempt to match that target to a prototype. If the target fits a certain prototype quite well, the perceiver may fill in any missing information about the target using that prototype (Schneider & Blankmeyer, 1983).

Prototypes in the organizational context

One specific example of the influence of prototypes that has been well studied in the organizational context pertains to prototypes of leadership. This stream of research emphasizes two main points: The first is that people formulate and hold prototypes of leadership such that they categorize traits and behaviors that discriminate "leaders" from "non-leaders" and "good leaders" from "bad leaders," for example (Lord, Foti & Phillips, 1982; Lord, Foti & de Vader, 1984; Phillips & Lord, 1981).

The second point is that when expectations of leadership are made salient, the demonstration of prototypical traits and behaviors does effectively increase ratings and ultimately helps the careers of those leaders (Hogg & Terry, 2000; van Knippenberg & Hogg, 2003; Lord et al., 1984; Phillips & Lord, 1981; Ritter & Lord, 2007). For instance, a study by Rosette, Leonardelli and Phillips (2008) demonstrated that general cognitive representations of business leadership are predominantly Caucasian and therefore leads to lower evaluations of effective leadership by non-Caucasian leaders. Non-Caucasian individuals are at a disadvantage under evaluation because they differ from the characteristics prescribed by the prototype of business leadership. This research makes a strong case regarding the measurable use of prototypes in people's evaluations of others. Additionally, it suggests how these evaluations affect long-term outcomes in organizations by connecting adherence to prototypes to the actual emergence (or non-emergence) of leaders in organizations.

The creative prototype

The significance of prototypes is also highly applicable to creative individuals in organizations. While there has not been an extensive amount of research on the creative prototype, most of the existing research seems to agree on a unifying theme centering around the idea that people who express creative ideas are unconventional and nonconformist (Bain, 2005; Barron & Harrington, 1981; Elsbach & Kramer, 2003; Sternberg & Lubart, 1995). Coupled with this expectation of nonconformity, is a general rejection of materialism in favor of "idealism" or a sense that intellectual satisfaction and integrity in creative work is valued above all, including monetary gain (Bain, 2005; Csikzentmihalyi, 1996; Elsbach, 2009; Fletcher, 1999; MacDonald & Wilson, 2005; Murnighan & Conlon, 1991). In her work, Bain (2005) described how contemporary creative professionals have "consciously or unconsciously sought to preserve their symbolic (economic) marginalization and their mythologized alienation." This intentional separation from materialism complements the idealism that has come to define the prototype of the creative individual.

Supporting evidence for creative professionals' emphasis on idealism and against materialism has been found in several studies. For instance, in Murnighan and Conlon's (1991) seminal study of British string quartets, despite that many of the players could not sustain themselves financially solely by playing in their quartets, most of them reported great enjoyment and inspiration from their work which they described as being "more than a job (pg. 167)." Elsbach's (2009) qualitative study of

corporate car designers provides another rich example of the importance of idealism and its central role in the creative prototype by revealing how these designers utilized signature styles to distinguish their products, despite that these additions were not formally recognized or rewarded by their employers, as a way to affirm their creative identities. These designers expended additional effort to express themselves creatively in a way that did not result in additional monetary compensation, but that reestablished their commitment to the values they espoused as highly creative and idealistic individuals. Overall, idealism functions as the philosophical anchor of the creative prototype, and this expression of idealistic behaviors can be used to identify who is and is not creative under evaluation.

Materialism

If idealism is the overarching value of the creative prototype, then materialism certainly represents a competing value system. The present work adopts the definition used by Moschis and Churchill (1978) who define materialism as "orientations emphasizing possessions and money for personal happiness and progress." It may be argued that the word materialism connotes a variety of related concepts. For instance, many people conceptualize materialism in terms of consumer behavior. In such cases, the mention of materialism may also generate connections to concepts such as conspicuous consumption or extravagant spending on goods and services for the purpose of displaying income or wealth (Saad & Vongas, 2009; Veblen, 1899/1965). While the discussion of how consumer goods reflect materialism is an interesting one,

the current research maintains a focus on the prioritization of material wealth over non-material professional values, such as intellectual satisfaction in work. As such, the studies presented here focus on representing materialism as an orientation where the importance of material possessions and wealth are of the greatest concern and juxtaposes it with the idealistic values of creative professional that focus on the integrity of creative work (Bain, 2005; Elsbach, 2009).

Beyond the influence of material wealth and goods on the quality of life, psychological research has begun to examine materialism as a value system and how it affects the psychology of individuals as well as the individual's relationships with others (Kasser, 2002). For example, materialism, when held as a central value over other self-relevant values, predicts lower mental health and well-being and has also been shown to damage social relationships (Kasser & Ryan, 1993; Kasser & Ryan, 1996; McHoskey, 1999; Sheldon & Kasser, 1995; Van Boven & Gilovich, 2003). Not surprisingly, perceptions of materialism have also been shown to affect the way an individual is evaluated by others. In their research, Van Boven and colleagues (2010) showed that materialistic individuals are stigmatized by others by demonstrating how they are stereotyped to be more selfish, self-centered and extrinsically motivated compared to experiential people. In other words, when individuals signal to others that they are materialistic (e.g., by making a materialistic versus an experiential purchase), these individuals are assumed to be less giving, less generous with others of their time, and more superficial than comparative others. This research showed that

the stigmatization associated with materialism might extend beyond the values of material wealth and possessions to assumptions about the individual in other areas of his or her life. Furthermore, these impressions were cued by incidental information such as information that an individual chose a higher paying job over a lower paying job or information about a one-time purchase that was more materialistic than experiential (Van Boven et al., 2010).

Recent studies show that people think of materialistic individuals as being extrinsically motivated which in turn triggers other negative stereotypes (Kasser & Ryan, 1993; Van Boven et al., 2010). The impression of materialistic individuals as being extrinsically motivated is of particular importance because by definition, being extrinsically motivated is inconsistent with the idealism of the creative prototype. Because of this inconsistency with the creative prototype, the perception of materialism could theoretically cause them to be viewed as a less creative individual. As shown in related research on social influence, behavioral cues can extend to measurable differences in impressions of competence (Anderson & Kilduff, 2009; Nemeth & Wachtler, 1974). When considering how susceptible subjective ratings of creativity have been reported to be to dispositional causes (Amabile, 1982; Amabile, 1985; Amabile, 1996; Elsbach & Kramer, 2003; Goncalo et al., 2010; Kasof, 1995), one would expect that a person who appears to be materialistic would be at a significant disadvantage under evaluation, objective creativity notwithstanding.

As aforementioned, individuals involved in creative work identify as being more idealistic (Csikszentmihalyi, 1996; Elsbach, 2009; Murnighan & Conlon, 1991), and in fact, some may even go out of their way to signal that they are not at all extrinsically motivated (Bain, 2005; MacDonald & Wilson, 2005). Previous research has conceptualized identity as a self-defining goal where individuals accumulate symbols (e.g., educational degrees, etc.) for the purpose of recognition by others (Gollwitzer, 1986; Gollwitzer & Wicklund, 1985b; Wicklund & Gollwitzer, 1982). In other words, a person can exhibit the prototypical symbols (traits, values, behaviors, etc.) that are recognized by others to be associated with creativity, such as the rejection of materialism, to meet this self-definitional goal. Therefore, in order to maintain the impression of a prototypically creative person, exhibiting idealism about one's work is a key attribute and impressions of materialism may undermine the legitimacy of their creative identities. I posit that evaluations of creativity will be negatively influenced by impressions of materialism because materialism is assumed to be inconsistent with the values held by the prototypically creative individual.

The mention of extrinsic motivation in relation to a discussion of creativity may lead some people to question the importance of identifying a bias against materialism in this context. It may be argued, for example, that individuals who are materialistic are extrinsically motivated, and perhaps, objectively less creative than other individuals. This argument overlooks a few important points. First, the impression of materialism may completely inaccurate, particularly if it is based upon

an isolated, incident, such as a one-time decision. Second, to automatically assume that extrinsically motivated individuals are inherently uncreative would be premature depending on certain contextual factors (Amabile, 1993; Amabile & Mueller, 2007; Grant & Berry, 2011). In fact, Amabile's (1993) Model of Motivational Synergy describes circumstances under which extrinsic motivators can complement intrinsic motivation ultimately producing positive consequences for creativity if, for example, they are presented not as mechanisms of control, but as confirmations of competence. A shift has occurred in that creativity research has begun to examine a more multi-faceted approach to the influence of motivation on creative performance (Grant & Berry, 2011). For some time, extrinsic motivation (e.g., rewards) was assumed to undercut intrinsic motivation, described as the tendency to feel involved, interested, and challenged with work (Deci & Ryan, 1985; Deci & Ryan, 1987). Intrinsic motivation is a psychological factor that has been shown in numerous studies to facilitate creativity (see Amabile, 1985; Amabile, Barsade, Mueller & Staw, 2005; Elsbach & Hargadon, 2006; Kim, Isen & Goncalo, 2010). However, as researchers have continued to examine the relationship between motivation and creativity, results have shown that the story is more complicated than originally described and that extrinsic motivation is not detrimental to creative performance under all circumstances (Amabile; 1993; Amabile & Mueller, 2007; Shalley, Zhou & Oldham, 2004).

Perspective taking

At the heart of the bias this research is attempting to capture, is a generalized belief about materialists and the qualities and characteristics they possess, or a stereotype (Brewer & Kramer, 1985). In addition to drawing attention to an existing bias against materialism in the creative context, it is also important to consider what psychological factors may decrease this bias. Such a bias could negatively impact organizations by facilitating the failure to notice objectively creative ideas and people. Identifying ways in which such a bias might be mitigated could help organizations avoid such consequences. One specific factor that is likely to mitigate this effect is perspective taking, which has been shown in previous work to debias social thought and reduce stereotype accessibility (Galinsky & Ku, 2004; Galinsky & Moskowitz, 2000).

Previous research has shown that perspective taking increases the self-other overlap by increasing the accessibility of the self-concept (Davis, Conklin, Smith, & Luce, 1996), which essentially allows people to make attributions as though they were in the same situation. Under perspective taking, the activation of the self-concept is thought to override the activation of a stereotype resulting in different outcomes compared to a person who has not taken the perspective of another (Galinsky & Ku, 2004; Galinsky & Moskowitz, 2000). For this reason, I predict that when an individual takes the perspective of a materialistic target, the activation of the self-concept will reduce stereotyping and therefore the target will not be rated as less creative under evaluation of creativity.

Hypothesis 1: Perspective taking moderates the relationship between impressions of materialism and creativity such that people will rate materialistic targets as being less creative unless they engage in perspective taking which will mitigate the tendency to discount the creativity of those individuals.

Materialism specific to the creative context

One potential concern regarding this line of research may be that materialism triggers a bias such that a target's merits will consistently be discounted regardless of context. As previously mentioned, cues about materialism can affect impressions about other areas of a target's merits (Van Boven et al., 2010). To effectively examine the prototypical misfit between materialism and creativity, it would be helpful to demonstrate that impressions of materialism can influence evaluations of creativity specifically and is not simply the result of blanket stigmatization. If lower ratings are the result of a prototypical misfit between materialism and creativity, then impressions of materialism in a prototypically congruent context should not result in such a bias. For example, one would not expect a conflict between materialism and being practical or sensible as might be expected with creativity.

Hypothesis 2: Individuals will discount the competence of materialistic targets who are evaluated in the context of creativity, but will not discount the competence of materialistic targets who are evaluated in the context of practicality (creating a useful product).

Self-perceptions of materialism and creative performance

Research on the subjective evaluation of creativity has focused mostly on the amount of error in the process (Goncalo et al., 2010; Kasof, 1995). For example, in the domain of empirical research, evaluation of creative products has hinged upon consensus and expertise. Amabile's (1982) *consensual assessment technique* calls for the independent rating of creative products (of the same creative task) by experts as a valid way of empirically assessing creativity (Amabile, 1982; Baer, Kaufman & Gentile, 2004). Though Amabile's method directly addresses the challenges of drawing more objective conclusions of decidedly subjective material for the purposes of empirical rigor, it also speaks to some considerable complications inherent to the evaluation of creativity.

It may also be important to consider how the consequences of this process inform or influence an individual's actual creative performance. For instance, if congruence with a creative prototype is a factor in the subjective evaluation of creativity then it seems reasonable to assume that there also exists some normative pressure to conform to these expectations in order to yield favorable evaluations from others and also that individuals who value their creative identities are aware of this pressure on some level. Being cognizant of the traits and behaviors consistent with the creative prototype may complicate self-evaluations of creativity and perhaps even interfere with that individual's actual performance on a creative task. That is to suggest, concerns about being perceived as materialistic in a creative context may interfere with one's ability to perform creatively.

The issues associated with managing a creative identity may affect individuals in the same way stereotypes affect performance in other domains. Stereotype threat is a psychological experience that occurs when a negative stereotype about a group becomes salient as a criterion for evaluating performance, and consequently, individual group members become concerned that their performance may confirm that negative stereotype (Steele & Aronson, 1997). As explained by Schmader and colleagues (2008), stereotype threat is a cognitive imbalance between core concepts that the individual is motivated to resolve that results in disruptive mechanisms such as physiological stress responses and the reduction of working memory capacity (Schmader & Johns, 2003). These disruptive mechanisms then contribute to the individual's impaired performance on the task.

The stereotype threat literature is full of examples of how stereotypes of poor performance actually disrupt or impair an individual's actual performance resulting in lower test scores compared to a control condition (Osbourne, 1995; Steele & Aronson, 1995; Steele & Aronson, 1997). While the original studies focused on prevalent stereotypes about groups with a history of stigmatization such as the study of African-Americans and intellectual test performance (Steele & Aronson, 1995) and the study of women and mathematical aptitude (Johns, Schmader & Martens, 2005), the findings were extended to show that stereotype threat can also affect an individual for whom no stereotype of low ability previously existed in the tested domain (Aronson, Lustina, Good, Keough, Steele & Brown, 1999). For example, in their work, Aronson

and colleagues (1999) demonstrated that white males experienced stereotype threat when a comparison with Asians (a minority group stereotyped to excel at math) was invoked. These studies highlighted some contextual triggers of stereotype threat and also provided evidence to suggest that stereotype threat is most likely to undermine the performance of those individuals who are highly identified with the tested domain (Aronson et al., 1999).

In sum, just as prototypes influence evaluations of other people's creativity (Elsbach & Kramer, 2003; Goncalo et al., 2010; Kasof, 1995), it may also influence self-evaluations of creativity in similar ways such that self-perceptions of being inconsistent with the prototype will inform an individual that he or she is not as creative. As described in the stereotype threat literature, this process will likely disrupt the ability to perform a creative task when people are invested in being creative, for instance, when a task is revealed to be diagnostic of creativity.

The resulting hypothesis is:

> *Hypothesis 3: When people are manipulated to feel more materialistic, they will perform worse on a task they are told is diagnostic of creativity compared to people who are manipulated to feel less materialistic.*

Demonstrating the biases unique to the evaluation of creativity will also provide another angle from which to observe and study creativity in organizations. Knowing how to facilitate creativity may be much more meaningful when the obstacles that block the recognition and execution of creativity are identified. If the

creativity of individuals and products is incorrectly discounted, it may undermine effortful attempts to increase individual and group creativity in organizations. Furthermore, finding ways to mitigate these pitfalls will also be beneficial to this area of research. Creativity is increasingly becoming a central focus in the organization due to its positive impact on financial progress (Amabile, 1996). Further outlining the processes and biases involved in the evaluation of creativity is critical to making strides in this area.

CHAPTER 2

EXAMINING THE EFFECT OF MATERIALISM AND PERSPECTIVE TAKING ON THE EVALUATION OF CREATIVITY

STUDY 1

Study 1 was designed to investigate how impressions of materialism affect a target's rating of creativity using a single stimulus, the image of a painting titled "Evil Eye" painted by Damon Johnson, a working artist (see Appendix A). I predicted that people who are perceived to be materialistic are evaluated as being less creative than their less materialistic counterparts despite producing identical products. I also predicted that perspective taking, which has been shown to decrease the expression of stereotypes (Galinsky and Moskowitz, 2000), would mitigate this effect for individuals who were asked to evaluate a materialistic target for creativity.

Methods

Participants and Design

Participants were 106 undergraduates from a large private university in the United States (43% males, mean age of 20 years) who voluntarily participated in exchange for extra credit toward their final course grade. The experiment had a 2 (Perspective taking versus control) x 2 (High materialism versus Low materialism) between-subjects design.

Experimental procedure

Perspective Taking

Upon entering the experiment, participants were told that they would be shown a painting and then asked for their opinions in a short questionnaire. Prior to this activity, individuals who were randomly assigned to the perspective-taking condition were asked to write a short, first-person narrative essay (presented as a small writing assignment to assess linguistic ability) about a day in the life of an artist who works in mixed media whereas individuals who were randomly assigned to the control condition were given no further instructions. Previous studies have used this activity as an effective manipulation of perspective taking (Galinsky & Ku, 2004; Galinsky, Maddux, Gilin & White, 2008; Galinsky & Moskowitz, 2000).

Perceptions of the target's materialism

Just before participants are presented with the painting, they are given some information about the artist. Perceptions of the target's materialism were manipulated via the following prompt:

> "Earlier this year, the artist had two different commission offers. The artist chose the higher/*lower paying offer* which resulted in the following painting:

Similar prompts have been utilized in previous research (Van Boven et al., 2010) to effectively manipulate impressions of a target's materialism.

Dependent Measures

Creative evaluations of the artist

All participants are shown a picture and description of the same painting (see Appendix A): an untitled, abstract composition of a human face labeled "acrylic on

canvas" and dated 2008. Participants are given 5 minutes to view the painting. After they have finished viewing the painting, they are asked to assess their opinions about the creativity of the artist who created it by reporting agreement on how (1) Creative; (2) Innovative; and (3) Original they felt the artist was on 3 separate Likert scales of 1 to 5 (1 = "Strongly Disagree" to 5 = "Strongly Agree"). The α for these three items was 0.87.

Manipulation Checks

Perspective taking

Participants were asked to select the adjectives from a list of 30 that they felt best described themselves. They were also asked to select, from the same list, the adjectives they felt best described their impressions of the artist. As a measure of the self-other overlap theorized to occur under perspective taking, the number of overlapping adjectives selected by each participant was used as a check on the manipulation of perspective taking.

Perceptions of target's materialism

As a check on the manipulation of impressions of the target's materialism, participants were asked to complete Richins' (2004) Material Values Scale (MVS-9) (α = .88), a 9-item, validated measure of consumer materialism developed by Richins and Dawson (1992).[1] The items were designed to capture materialism, or in this case

[1] The psychometric properties of the MVS-9 were assessed through factor analyses, item analyses, reliability analyses, and validity testing. Validity correlations with several related constructs (including

the impression of materialism, as attitudes that are centrally held and therefore guide the conduct of one's life (Bearden et al., 2011). The self-report items were modified so that the artist was the subject of each question (See Appendix B).

Results

Manipulation Checks

Perspective taking

A 2 (Perspective taking versus Control) x 2 (High materialism versus low materialism) ANOVA on the number of overlapping adjectives reported by participants revealed that, as predicted, those participants who were randomly assigned to engage in perspective taking reported a significantly higher number of overlapping adjectives ($M = 3.04$, $SD = 3.83$) compared to individuals who were randomly assigned to the control condition ($M = 1.75$, $SD = 1.79$), $F(1, 102) = 4.36$, $p < 0.05$. There was not a significant main effect of materialism nor was there a significant interaction, both $Fs < 1$, *ns*.

Perceptions of target's materialism

Scores on the MVS-9 items were averaged to form a composite score to represent the impressions of materialism reported by each participant. A 2 (Perspective taking versus Control) x 2 (High materialism versus Low materialism) ANOVA on the average MVS-9 scores participants applied to the designer verified a

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Belk's (1985) materialism scale) were quite strong with a coefficient alpha of .84. (Please see Bearden,

significant main effect of materialism, F (1, 102) = 4.23, $p < 0.05$, such that participants who read that the artist chose a higher paying commission offer reported higher impressions of the target's materialism ($M = 3.06$, $SD = .46$) compared to participants who read that the artist chose a lower paying commission offer ($M = 2.78$, $SD = 0.58$). There was no significant main effect of perspective taking, $F < 1$, *ns*, nor was there a significant interaction, $F < 1$, *ns*.

Creativity of the Artist

Evaluations of the target's creativity were measured by participants' ratings of how (1) *Creative*; (2) *Innovative*; and (3) *Original* the designer was perceived to be., The items were averaged to form a composite score. A 2 (Perspective taking versus No perspective taking) x 2 (High materialism versus Low materialism) ANOVA on the average creativity rating of the product designer revealed no main effects for perspective taking or materialism, both *Fs <1, ns*. However, there was a significant interaction, F (1, 102) = 6.09, $p < 0.05$ (See Figure 1).

As predicted in Hypothesis 1, when participants did *not* participate in perspective taking, the materialistic artist was rated as significantly being less creative, innovative, and original ($M = 3.21$, $SD = 0.58$) compared to the less materialistic artist ($M = 3.56$, $SD = 0.58$), t (1, 55) = -2.12, $p < 0.05$. In contrast, when participants engaged in perspective taking, they did not rate the materialistic artist ($M = 3.59$, $SD =$ .86) as being significantly less creative, innovative, and original compared to the less

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Haws & Netemeyer, 2011, for a review).

materialistic artist ($M = 3.27$, $SD = .70$), $t(1, 47) = 1.45$, *ns*. Furthermore, as predicted in Hypothesis 1, a one-tailed planned comparison revealed that when participants engaged in perspective taking, the ratings given to the materialistic artist were significantly higher, ($M = 3.59$, $SD = .86$) than the ratings of the materialistic artist without perspective taking ($M = 3.21$, $SD = 0.58$), $t(1, 54) = 1.78$, $p < 0.05$. This result replicates previous research that demonstrates the ability of individuals who engage in perspective taking to rely less on stereotypes when evaluating a member of a stereotyped group.

Discussion

The results of Study 1 showed that individuals who perceived a target as being more materialistic rated that target as being less creative compared to individuals who perceived the target as being less materialistic despite being shown an identical creative stimulus. Additionally, it replicated previous research demonstrating the influence of perspective taking on debiasing social thought and reducing reliance on the negative stereotypes associated with a target of judgment. These results provided some evidence to support the hypothesis that the values of materialism and the values associated with the creative professional identity are incompatible and result in consequences under evaluation for individuals who are perceived to be materialistic.

A potential limitation of Study 1 study that should be addressed is the possibility that the prototype of the non-materialistic, highly creative individual is particularly strong in the context of fine arts and therefore does not extend to other

types of creative professionals. To the extent that the materialism-creativity bias is relevant to the variety of organizations where non-artistic creativity is considered a valuable commodity, these results should also be found in a less artistic context. Study 2 addressed this concern directly by testing these questions with a different target, specifically, a product designer who designed gadgets for the home and office.

CHAPTER 3

EXAMINING THE EFFECT OF MATERIALISM AND PERSPECTIVE TAKING ON THE EVALUATION OF CREATIVITY (REPLICATION WITH PRODUCT DESIGNER)

STUDY 2

Study 2 was designed as a replication of Study 1, which examined how impressions of materialism affect evaluations of a target's creativity. In Study 2, I replaced the painter and the abstract painting with the less artistic example of a product designer who designs gadgets for the home and office and a lamp that is plugged into a phone socket. Again, I predicted that product designers who were perceived to be materialistic would be evaluated as being less creative compared to their less materialistic counterparts despite producing an identical, creative product. As in Study 1, I also predicted that participants who engaged in perspective taking would not rate materialistic product designers as being less creative.

Methods

Participants and Design

Participants were 97 undergraduates from a large private university in the United States (64% males, mean age of 20 years) who voluntarily participated in exchange for extra credit toward their final course grade. The experiment had a 2 (Perspective taking versus No perspective taking) x 2 (High materialism versus Low materialism) between-subjects design.

Experimental procedure

The experimental procedure of Study 2 was identical to that of Study 1 with the exception of exchanging the artist example with the example of the product designer.

Perspective taking

Perspective taking was manipulated in the same way as described in Study 1.

Perceptions of the target's materialism

Before participants are shown the product, their perceptions of the target's materialism were manipulated via the following prompt:

> "Earlier this year, the designer had offers from two companies to create a new product marketed to college students and young professionals. The designer chose the higher paying offer/*lower paying offer* which resulted in the following product."

Manipulation of materialism was checked using the MVS-9 ($\alpha = .86$).

Dependent measures

Creative evaluations of the product designer

All participants are shown a picture and description of the same product: a lamp that runs on electricity from a phone socket which was featured as a creative invention in *Wired*, a magazine that reports on how technology affects the economy and culture (Sorrel, 2009) (See Appendix C). Participants are given 5 minutes to view the product. After they have finished reviewing the product, they are asked to assess their opinions about the creativity of the product designer who created it by rating

their agreement on how (1) *Creative*; (2) *Innovative*; and (3) *Original* they felt the person who created the lamp was on three separate Likert scales of 1 to 5 (1 = "Strongly Disagree" to 5 = "Strongly Agree"). The α for these three items was 0.86.

Results

Manipulation Checks

Perspective taking

The manipulation of perspective taking was checked in the same way as in Study 1. A 2 (Perspective taking versus Control) x 2 (High materialism versus low materialism) ANOVA on the number of overlapping adjectives reported by participants revealed that, as predicted, those participants who were randomly assigned to engage in perspective taking reported a significantly higher number of overlapping adjectives (M = 4.29, SD = 2.97) compared to individuals who were randomly assigned to the control condition ($M = 3.18$, $SD = 2.43$), $F(1, 93) = 4.14$, $p < 0.05$. No significant main effect of materialism or significant interaction was found, (both $Fs < 1$, *ns*).

Perceptions of target's materialism

As in Study 1, participants' impressions of the target's materialism were measured using their responses to the MVS-9. MVS-9 scores were averaged to form a composite score per participant. A 2 (Perspective taking versus Control) x 2 (High materialism versus Low materialism) ANOVA on the average MVS-9 scores

participants applied to the designer verified a significant main effect of materialism, F (1, 93) = 4.07, $p < 0.05$, such that participants who read that the product designer chose a higher paying job offer reported higher impressions of materialism ($M = 2.94$, $SD = 0.57$) for the product designer compared to participants who read that the product designer chose a lower paying job offer ($M = 2.74$, $SD = 0.43$). No significant main effect of perspective taking or significant interaction was found, F (1, 93) = 2.38, *ns* and F (1, 93) = 1.30, *ns*.

Creativity of the Target (*Product Designer*)

Evaluations of the target's creativity were measured by participants' ratings of how (1) *Creative*; (2) *Innovative*; and (3) *Original* the designer was perceived to be. The scores were averaged to form a composite score. A 2 (Perspective taking versus Control) x 2 (High materialism versus Low materialism) ANOVA on the average creativity rating of the product designer revealed no significant main effects for perspective taking or materialism, both $Fs < 1$, *ns*. However, there was a significant interaction, F (1, 93) = 4.10, $p < 0.025$. (See Figure 2).

As predicted (and shown in the results of Study 1), participants who did not engage in perspective taking rated materialistic designers as being significantly less creative ($M = 3.16$, $SD = .90$) compared to the less materialistic target, ($M = 3.65$, $SD = .72$), t (1, 42) = -2.07, $p < 0.05$. When participants took the designer's perspective, there was not a significant difference between the creativity ratings of the materialistic designer ($M = 3.67$, $SD = .73$) and the less materialistic designer ($M = 3.33$, $SD = .93$),

$t(1, 48) = 1.42$, *ns*. In contrast, when participants engaged in perspective taking, the ratings given to the materialistic product designer were significantly higher, ($M = 3.65$, $SD = .72$) compared to the ratings of the materialistic artist without perspective taking ($M = 3.16$, $SD = 0.90$), $t(1, 44) = 2.09$, $p < 0.05$.

As shown in Study 1, these results again demonstrate a bias against materialists in a creative context. When participants read that the target chose a higher paying job offer over a lower paying job offer, they rated that individual as being less creative despite being shown an identical, creative stimulus. These findings also replicate previous research on the effectiveness of perspective taking to reduce the reliance on stereotypes when evaluating a target as a member of a stereotyped group.

Discussion

The results of Studies 1 and 2 provided some evidence to suggest that impressions of materialism do result in lower evaluations of a target's creativity and that this bias is not unique to the context of artistic creativity as these results were also found using the example of the product designer and the lamp. Furthermore, participants who engaged in perspective taking did not discount the creativity of materialistic targets. Taken together, these findings lend some evidence to support the existence of a bias against materialists where creativity is concerned; however, there remained an important alternative explanation that needed to be addressed. It was possible that the results found in Studies 1 and 2 were not isolating a bias against materialists in a creative context, but rather picking up on a general, pervasive

prejudice against materialists. Indeed, previous studies have shown that people generally consider materialists to be less likable (Van Boven et al., 2010) and also materialists, themselves, report being less satisfied with their lives in a variety of ways (Kasser & Ryan, 2001). Study 3 was designed to distinguish the bias against materialists in a creative context from a negative halo that would be expected to result in the discounting of target's merits regardless of context.

CHAPTER 4

FURTHER EXAMINATION OF THE RELATIONSHIP BETWEEN MATERIALISM AND CREATIVITY

STUDY 3

In Study 3, I investigated the possibility that the bias found in these earlier studies was unspecific to creativity or the creative prototype, but rather the result of a general stigmatization of materialists regardless of context. The results of Study 3 attempted to challenge this possibility by contrasting the influence of materialism in creative versus non-creative contexts. In other words, when there was no conflict between material values and the evaluative criteria (in this case being practical and designing something useful), I did not expect the combination to yield lower evaluations of the target. Study 3 aimed to provide further evidence for a bias against materialists in a creative context by demonstrating that the bias does not occur when the context of evaluation is framed by the criterion of usefulness. I argued that because designing something useful and being materialistic are not prototypically incongruent, participants would not discount the merits of a target under these circumstances the way they do when there are creative expectations.

Methods

Participants and Design

Participants were 139 undergraduates from a large private university in the United States (57% males, mean age of 19 years) who participated in exchange for

extra credit toward their final course grade. The experiment had a 2 (Creativity salience versus Usefulness salience) x 2 (High materialism versus Low materialism) between-subjects design.

Experimental procedure

Creativity or Usefulness Salience

Similarly to method and procedure used in Studies 1 and 2, participants were told that they would be shown a product and asked for their opinions in a short questionnaire. Participants randomly assigned to the creativity salience condition were told that the product was a finalist in a contest in which the main criterion was to design a product that was *highly creative*. Participants randomly assigned to the Usefulness Salience condition were told that the product was a finalist in a contest where the main criterion was to design a product that was *highly useful*.[1]

Perceptions of the target's materialism

Perceptions of the product designer's materialism were manipulated using the exact same manipulation and check (α = .82), so the used in Study 2. Before participants were shown the product, their perceptions of the target's materialism were manipulated via the following prompt:

> "Earlier this year, the designer had offers from two companies to create a new product marketed to college students and young professionals. The designer chose the higher paying offer/*lower paying offer* which resulted in the following product."

Dependent measures

Creative evaluations of the designer

Again, all participants were shown a picture and description of the same lamp used in Study 2, one that runs on electricity from a phone socket. Participants were given 5 minutes to view this product. After they finished reviewing the product, they were asked for their opinions about the competence of the product designer who created it. Participants were asked to rate their agreement on (1) *how skilled the designer is*; (2) *how talented the designer is*; and (3) *how good the designer is at his/her job* on three separate Likert scales of 1 to 5 (1 = "Strongly Disagree" to 5 = "Strongly Agree") (α = .81).

Results

Manipulation Checks

Creativity or Usefulness Salience

Though a psychological manipulation was not actually applied in this condition, to check whether participants were paying attention to the prompts presented to them participants were asked to recall the main criterion of the contest in which the product designer was a finalist. 100% of the participants in the creativity salience condition correctly listed "creativity" as the criterion (n = 77), and 100% of the participants in the usefulness salience condition correctly listed "usefulness" as the criterion (n = 62).

Perceptions of target's materialism

As in Studies 1 and 2, I utilized the average score on the MVS-9 as a check on the participants' impressions of the target's materialism. The items were averaged to form a composite score. A 2 (Creativity versus usefulness salience) x 2 (High materialism versus Low materialism) ANOVA on the average MVS scores verified a significant main effect of materialism, $F(1, 135) = 6.80$, $p < 0.05$, such that participants who read that the product designer chose a higher paying job offer reported higher impressions of materialism ($M = 3.00$, $SD = 0.50$) of the product designer compared to participants who read that the product designer chose a lower paying job offer ($M = 2.79$, $SD = 0.44$). No significant main effect of perspective taking or significant interaction was found, both $Fs < 1$, *ns.*

Perceived competence of the target

Participants' ratings of (1) *how skilled*; (2) *how talented*; and (3) *how good at his/her job* the product designer was perceived to be were averaged to form a composite score per participant. A 2 (Creativity versus Usefulness salience) x 2 (High materialism versus Low materialism) ANOVA on the average creativity rating of the product designer revealed no main effects for salience condition or materialism, both $Fs < 1$, *ns*. However, there was a significant interaction, $F(1, 135) = 7.49$, $p < 0.01$. As predicted, participants to whom creativity was made salient rated the materialistic product designer as being less competent ($M = 3.44$, $SD = .54$) compared to the less materialistic product designer ($M = 3.81$, $SD = .68$), $t(1, 60) = 2.51$, $p < 0.05$. In contrast, when usefulness was made the salient context, participants did not rate the

materialistic product designer ($M = 3.44$, $SD = .44$) to be any less competent than the less materialistic product designer ($M = 3.61$, $SD = .56$), $t(1, 67) = 1.46$, *ns* (See Figure 3).

Discussion

The results of Study 3 showed that in the context of creativity, impressions of materialism resulted in lower ratings of competence; however, in the context of creating a product designed to be useful, impressions of materialism did not result in lower ratings of the designer's competence. These results demonstrated that the bias against materialism can be specific to the context of creativity, and is not simply the result of a general stigma applied to materialists under all circumstances. In addition to lending further support for the materialism-creativity prototypical mismatch and the resulting bias, the findings also highlighted a difference in the implicit expectations for individuals who are creative professionals and individuals who are not. Competence evaluations were discounted for appearing to care about money when they designed for creativity, but not when they designed for usefulness.

CHAPTER 5

IMPRESSIONS OF MATERIALISM: FURTHER CONTEXTUALIZATION AND EXPLORATORY ANALYSES

STUDY 4

Though the current research adopts a definition of materialism that reflects a prioritization of material wealth and possessions over other ideals, the world *materialism* may also connote other concepts that generate alternative explanations for the results found in the previous three studies. For instance, information that someone has chosen a lower paying offer over a higher paying offer may not only cue materialism as shown in previous studies (Van Boven et al., 2010), but the potentially illogical nature of the decision (i.e., choosing a lower paying job offer over a higher paying job offer) might reflect non-conformist behavior which may obscure the results found. Study 4 was specifically designed to address these concerns, includes separate measures of creativity and competence as well as some additional, exploratory measures that investigate how perceptions of materialism affect certain aspects of a target's persona (e.g., creativity, competence, generosity, etc.).

The method and procedure of Study 4 was almost identical to Studies 1 and 2, with a few important differences to the manipulation of perceptions of materialism and additional assessments of the target. Again, I investigate how perceptions of materialism affect perceptions of a target's creativity using the example of a product designer who designs gadgets for the home and office. As in Studies 1 and 2, I

predicted that product designers who are perceived to be materialistic would be evaluated as being less creative compared to their less materialistic counterparts despite producing identical products. I also predicted that participants who engaged in perspective taking would not rate materialistic product designers as being less creative.

Methods

Participants and Design

Participants were 95 undergraduates from a large private university in the United States (48% males, mean age of 20 years) who voluntarily participated in exchange for extra credit toward their final course grade. The experiment had a 2 (Perspective taking versus No perspective taking) x 2 (High materialism versus Low materialism) between-subjects design.

Experimental procedure

Perspective taking

Perspective taking was manipulated in the exact same way as described in Studies 1 and 2.

Perceptions of the target's materialism

Before participants are shown the product, their perceptions of the target's materialism were manipulated via the following prompt:

> *This designer makes a reasonable living designing home and office products. Earlier this year, the designer had offers from two companies to create a new product marketed to college students and young professionals. Offer "A" paid more money. Offer "B" was more intrinsically enjoyable. The designer chose,*

"A," the higher paying offer. OR This designer makes a reasonable living designing home and office products. Earlier this year, the designer had offers from two companies to create a new product marketed to college students and young professionals. Offer "A" was more intrinsically enjoyable. Offer "B" paid more money. The designer chose, "A," the more intrinsically enjoyable offer.

Unlike the materialism manipulation used in Studies 1 and 2, this prompt clearly indicates that the designer is not in great financial need. Furthermore, the prompt unambiguously states that the individual either chose an intrinsically enjoyable project over more money or more money over an intrinsically enjoyable project. This version of the manipulation explains explicitly to the participant why the target chooses the higher paying offer over the lower paying offer. Manipulation of materialism was checked with the same MVS-9 items from the previous studies ($\alpha = .88$).

Dependent measures

Evaluations of the product designer's creativity

All participants were shown a picture and description of the product (lamp) used in Studies 2 and 3. As in the previous studies, participants were given 5 minutes to view the product. After they finished reviewing the product, they were asked to assess their opinions about the creativity of the product designer who created it by rating their agreement on how (1) *Creative*; (2) *Innovative*; and (3) *Original* they felt the person who created the lamp was on three separate Likert scales of 1 to 5 (1 = "Strongly Disagree" to 5 = "Strongly Agree") ($\alpha = 0.90$).

Evaluations of the product designer's competence

In addition to the creativity measures described above, participants were also asked to rate the designer's competence using the same measures from Study 3. They were asked for their opinions about the general competence of the product designer who created the lamp by rating their agreement on (1) *how skilled the designer is*; (2) *how talented the designer is*; and (3) *how good the designer is at his/her job* on three separate Likert scales of 1 to 5 (1 = "Strongly Disagree" to 5 = "Strongly Agree"). The α for these three items was 0.86. Unlike the previous studies, the participants' ratings of creativity and competence were collected in the same battery of measures to see how they were influenced by impressions of materialism.

Exploratory analyses regarding impressions of materialism: warmth, generosity, self-indulgence

Finally, participants were asked to rate how warm the designer was perceived to be. These measures were included to see how impressions of materialism influenced the way participants felt about the targets on measures including but also separate from creativity. I predicted that participants who were randomly assigned to the high materialism condition would rate the target as being less warm in conjunction with previous research on the subject (Kasser & Ryan, 2001; Van Boven et al., 2010). Participants were asked to rate their agreement on how (1) *warm*; (2) *generous*; and (3) *self-indulgent* (reverse-coded) the designer was thought to be on three separate Likert scales of 1 to 5 (1 = "Strongly Disagree" to 5 = "Strongly Agree"). Again, these items were included in the same battery of measures as the items that evaluated

the target's creativity and competence. These items did not form a reliable scale, so they were examined individually.

Results

Manipulation Checks

Perspective taking

The manipulation of perspective taking was checked in the same way as in the previous studies. A 2 (Perspective taking versus Control) x 2 (High materialism versus low materialism) ANOVA on the number of overlapping adjectives reported by participants revealed that, as predicted, those participants who were randomly assigned to engage in perspective taking reported a significantly higher number of overlapping adjectives in their self-descriptions with the target, $F(1, 93) = 5.47$, $p < 0.05$, ($M = 3.25$, $SD = 1.87$) compared to individuals who were randomly assigned to the control condition ($M = 2.48$, $SD = 1.81$). No significant main effect of materialism was found, $F < 1$, *ns*, and there was a marginally significant interaction, $F(1, 93) = 3.68$, $p = 0.1039$.

Perceptions of target's materialism

As in the previous studies, MVS-9 scores were averaged to form a composite score per participant. A 2 (Perspective taking versus No perspective taking) x 2 (High materialism versus Low materialism) ANOVA on the average MVS-9 scores participants applied to the designer verified a significant main effect of materialism, F

(1, 93) = 35.98, $p < 0.01$, such that participants who read that the product designer chose a higher paying job offer reported higher impressions of materialism ($M = 3.03$, $SD = 0.46$) for the product designer compared to participants who read that the product designer chose the more intrinsically enjoyable offer ($M = 2.39$, $SD = 0.56$). There was not a significant main effect of perspective taking nor was there a significant interaction, both $Fs < 1$, *ns*.

Evaluations of the target's creativity

Evaluations of the target's creativity were measured by participants' ratings of how (1) Creative; (2) Innovative; and (3) Original the designer was perceived to be. The items were averaged to form a composite score. A 2 (Perspective taking versus No perspective taking) x 2 (High materialism versus Low materialism) ANOVA on the average creativity rating of the product designer revealed a significant main effect for materialism, $F(1, 93) = 6.37$, $p < 0.025$. Participants who were randomly assigned to the higher materialism condition rated the target as being significantly less creative ($M = 3.37$, $SD = .82$) compared to participants who were assigned to the lower materialism condition ($M = 3.81$, $SD = .85$), $t(1, 45) = -2.02$, $p < 0.05$. There was not a significant main effect for perspective taking nor was there a significant interaction, both $Fs < 1$, *ns*. (See Figure 4).

These results were not exactly in sync with the results found in Studies 1 and 2. Similar to Studies 1 and 2, the findings showed that higher impressions of the target's materialism resulted in lower evaluations of creativity. In contrast to Studies

1 and 2, the predicted interaction with perspective taking was not found. I discuss potential reasons for why this result was not found in the discussion below.

Evaluations of the target's competence

Evaluations of the target's competence were measured using the same adjectives in Study 3, namely, asking participants to rate their agreement on how: (1) skilled the designer is; (2) talented the designer is; and (3) good the designer is at his/her job on three separate Likert scales of 1 to 5 (1 = "Strongly Disagree" to 5 = "Strongly Agree"). The items were averaged to form a composite score. A 2 (Perspective taking versus No perspective taking) x 2 (High materialism versus Low materialism) ANOVA on the average competence rating of the product designer revealed no significant main effects or a significant interaction, all $Fs < 1$, *ns.* In other words, no differences were found in impressions of the target's competence regardless of the perspective taking or materialism conditions to which participants were assigned.

Similar to the results found in Study 3, participants appeared to differentiate and isolate the relationship between creativity and materialism. Participants did not merely apply a negative halo to all aspects of the target, but rather specifically discounted the creativity of the target, and not the general competence of the target. Taken together, these results showed that participants do rate materialistic individuals as being less creative.

Exploratory analyses: Evaluations of the target's warmth, generosity, and self-indulgence

In addition to asking participants to rate the creativity and competence of the target, I also included some additional measures that explored some other aspects of the target's persona that may be influenced by impressions of materialism. Specifically, participants were asked to evaluate their agreement on how (1) warm; (2) generous; and (3) self-indulgent they felt the target was on three separate Likert scales of 1 to 5 (1 = "Strongly Disagree" to 5 = "Strongly Agree").

A 2 (Perspective taking versus Control) X 2 (High Materialism versus Low Materialism) ANOVA revealed a significant main effect for materialism, $F(1, 93) = 7.39$, $p < .01$, such that participants rated the target who chose a higher paying job offer to be significantly less warm ($M = 2.98$, $SD = 0.28$) compared to the target who chose the intrinsically enjoyable offer ($M = 3.20$, $SD = 0.50$). No significant main effect for perspective taking or significant interaction was found, both $Fs < 1$, *ns.* Regarding, generosity, a 2 (Perspective taking versus Control) X 2 (High Materialism versus Low Materialism) ANOVA revealed a significant main effect for materialism, $F(1, 93) = 4.24$, $p < .05$, such that participants rated the target who chose a higher paying job offer to be significantly less generous ($M = 2.91$, $SD = 0.41$) compared to the target who chose the intrinsically enjoyable offer ($M = 3.10$, $SD = 0.47$). No significant main effect for perspective taking or significant interaction was found, both

Fs < 1, *ns.* Finally, a 2 (Perspective taking versus Control) X 2 (High Materialism versus Low Materialism) ANOVA revealed a significant main effect for materialism, $F(1, 93) = 7.85$, $p < .01$, such that participants rated the target who chose a higher paying job offer to be significantly more self-indulgent ($M = 3.09$, $SD = 0.55$) compared to the target who chose the intrinsically enjoyable offer ($M = 2.69$, $SD = 0.77$). No significant main effect for perspective taking or significant interaction was found, both *Fs* < 1, *ns.*

These exploratory measures were found in the predicted directions (e.g., less generous and warm, but more self-indulgent) and correspond with the manipulation of materialism. They provide an interesting starting point for additional research on the influence of impressions of materialism on evaluations of others.

Discussion

Together with the findings from the previous 3 studies, these results demonstrate a bias against materialists in a creative context. These results did not, however, replicate previous research on the effectiveness of perspective taking to reduce the reliance on stereotypes when evaluating a target as a member of a stereotyped group. One reason that this finding was not replicated might be due to the relatively stronger manipulation of materialism used in this study. Because the manipulation clearly states that the target gives up the opportunity to pursue an intrinsically enjoyable offer in exchange for one that pays more money, it may have created a situation whereby it was difficult or unpleasant for participants to put

themselves in the shoes of the target. Future research may seek to address the boundary conditions of this interactive relationship between perspective taking, materialism and the creative prototype and when it may produce a null or perhaps even opposite effect on the evaluator.

This study was different from the previous three in that it included measures of the target's creativity and competence in the same the study. As shown in the results of Study 3, impressions of materialism yielded lower evaluations of measures related to creativity and did not affect evaluations of competence that were unrelated to creativity. Again, these results distinguish the bias against materialists in the domain of creativity from a general, negative halo. This study also included some exploratory measures that were not included in the previous studies. Not surprisingly, individuals who were perceived to prioritize money above all were also rated to be less warm, less generous, but more self-indulgent. Having all of these measures tested within the same study sheds some light on how impressions of materialism influence a variety of evaluations concerning a target. Additionally, the findings further supported the findings in Studies 1, 2, and 3. Not only did they reveal that impressions of materialism yielded lower results of creativity, but they also showed that they did not have a negative impact on general ratings of competence.

The previous four studies have demonstrated a bias against materialists in a creative context using two different examples of targets (a painter and a product designer) and two different manipulations of impressions of materialism. Thus far the

current research has focused primarily on the creative evaluation of materialistic targets. An important question remains, namely, how do self-perceptions of materialism influence the individual and his or her creative performance? Individuals who perform under expectations of creativity may feel pressure to not be materialistic or at the very least to avoid appearing materialistic. Furthermore, this concern is a legitimate one as shown by the results of the previous four studies. In Study 5, I shifted the focus of the materialism-creativity relationship to the individual. Using the classic experimental setup designed to study stereotype threat, I tested the influence of materialism on individual creative performance.

CHAPTER 6

STEREOTYPE THREAT OF MATERIALISM IN A CREATIVE CONTEXT

STUDY 5

Study 5 was designed to examine how self-perceptions of materialism influence individual creative performance. I predicted that when a task is presented as being diagnostic of creativity, individuals who are primed to feel more materialistic will perform worse on that task because they experience stereotype threat and the negative psychological consequences associated with it (Steele & Aronson, 1995). More specifically, I predicted that only individuals randomly assigned to the Materialism/Diagnostic Creativity Test condition would experience impaired performance on the creative problem solving task. Building on the results found in the previous four studies, this study was designed to demonstrate another facet of the bias against materialists where creativity is concerned.

Methods

Participants and Design

Participants were 125 undergraduates from a large private university in the United States (44% males, mean age of 20 years) who voluntarily participated in exchange for extra credit toward their final course grade. The experiment had a 2 (high materialism versus low materialism) x 2 (creativity task: diagnostic versus non-diagnostic) between-subjects design. 15 self-declared non-native speakers of English were removed from the sample due to the linguistic requirements of the creativity task

(Remote Associates Test), which have no bearing on the empirical question being tested. 1 participant was removed because s/he was mistakenly given extra time to complete the creativity task leaving a total of 109 participants.

Experimental procedure

Materialism

Upon entering the experiment, participants were asked to complete a short written exercise. Participants who were randomly assigned to the *high materialism* condition were asked to list "*5 reasons why having a lot of money sometimes makes people happier*." Participants who are randomly assigned to the *low materialism* condition were asked to list "*5 reasons why having a lot of money sometimes does not make people happier*." Similar manipulations have been used to effectively shift attitudes about religion (Salancik & Conway, 1975) and individualism/collectivism (Goncalo & Staw, 2006) (see Schwarz, 1999 for an extensive review). By asking participants to recall specific examples in which they behaved in accordance with a particular set of values, manipulation of their religious, cultural, or in this specific case, materialistic orientation can occur.

Stereotype threat: Presenting the task as diagnostic of creativity

All participants were asked to complete the same 5 moderately difficult Remote Associates Test (Mednick et al., 1964) items. Participants who were randomly assigned to the diagnostic condition were told the following: "The following puzzle is a short test of creativity that was developed by a prestigious

organization. It is a validated measure of creativity and predicts success in creative fields." Participants who were randomly assigned to the non-diagnostic condition were told that the task was a "word puzzle developed by students." These descriptions are modeled after the language used in numerous stereotype threat studies (see Nguyen & Ryan, 2008, for a review).

Dependent Measures

Creativity

All participants were presented with the same 5 Remote Associates Test (RAT), a validated measure of creative problem solving (Mednick, Mednick & Mednick, 1964) that has been used in numerous studies to measure creativity (e.g., Isen et al., 1987; Zhong et al., 2008). The RAT requires participants to think of a word that is related to a set of three other words. For instance, the participant may be presented with the words: *fish*, *mine*, and *rush*. The unique answer to this problem is *gold.* Finding the unique answer requires the correct recombination of associative elements. Participants were given 5 minutes to complete 5 moderately difficult RAT items (Bowden & Jung-Beeman, 2003; Erez & Isen, 2002; Isen et al., 1987).

Manipulation Check

Self-perceptions of materialism

Participants were asked to complete the MVS-9 (Richins, 2004) as a check of the materialism manipulation ($\alpha = .88$). Unlike the previous studies, where the items

applied to an external target, this time participants answered the self-report items phrased in the first-person (See Appendix B).

Results

Manipulation Checks

Diagnostic or Non-diagnostic activity

Though a psychological manipulation was not actually applied in the diagnostic/non-diagnostic condition, to ensure participants were paying attention to the prompts presented to them participants were asked to recall what kind of activity they were asked to complete. As expected, 100% of the participants in the diagnostic condition correctly listed the activity as a "test of creativity" (n = 52), and 100% of the participants in the non-diagnostic condition correctly listed the activity as a "word puzzle" (n = 57).

Self-perceptions of materialism

The MVS-9 scores were averaged to create a composite score per participant. A 2 (High Materialism versus Low Materialism) x 2 (Diagnostic versus Non-diagnostic) ANOVA on the average MVS-9 scores of participants verified a significant main effect of materialism, $F(1, 105) = 4.82$, $p < 0.05$, such that participants who listed reasons why having a lot of money sometimes makes people happier reported higher self-perceptions of materialism (M = 2.75, SD = 0.57) compared to participants who listed reasons why having a lot of money sometimes does not make people happier (M = 2.51, SD = 0.54). No significant main effect of

diagnostic/non-diagnostic condition (threat) or significant interaction was found, both *Fs* < 1, *ns*.

Creativity

A 2 (High Materialism versus Low Materialism) x 2 (Creativity Test: Diagnostic versus Non-Diagnostic) ANOVA on the total RAT scores of participants revealed a marginally significant main effect of the creativity test, $F(1, 105) = 2.77$, $p = 0.0990$, such that participants who were told that the test was diagnostic of creativity performed slightly worse ($M = 1.08$, $SD = 1.10$) compared to participants who were told that the test was just a word puzzle ($M = 1.49$, $SD = 1.40$). There was no main effect of materialism, $F(1, 105) = 1.18$, *ns* and no significant interaction, $F(1, 105) = 1.34$, *ns*.

I utilized planned contrasts to test my specific predictions directly. As predicted, a planned contrast revealed that when individuals were primed to feel more materialistic, they performed significantly worse on the RAT when they were told the test was diagnostic of creativity ($M = .81$, $SD = .83$), compared to when they were told the test was merely a word puzzle ($M = 1.50$, $SD = 1.43$), $t(1, 53) = -2.16$, $p < 0.05$. Table 1 shows the descriptive statistics and confidence intervals. Finally, a second planned contrast (diagnostic/materialism versus three other conditions) revealed that the diagnostic/materialism condition ($M = .81$, $SD = .83$) performed significantly worse compared to the other three conditions ($M = 1.45$, $SD = 1.36$), $t(1, 107) =$ -

2.29, $p < 0.05$.[2] These results confirm the prediction that participants who were manipulated to feel more materialistic experienced impaired performance when they were told that a task was diagnostic of creativity, but not when they were told the task was an innocuous word puzzle, and also that individuals who were manipulated to feel more materialistic did not experience impaired creativity when there was no threat of confirming the negative stereotype of being uncreative (See Figure 5).

Affect

Because the materialism manipulation references happiness, I checked to see if there were differences in positive and negative affect that could possibly influence performance on the RAT as well as any additional measures. I used all of the positive-negative affect PANAS-x items (Watson & Clark, 1994) (see Appendix D) to measure positive and negative affect to see if there were any differences between the conditions to examine whether or not it could have influenced the results found in this study. An ANOVA revealed no significant main effects of self-reports of positive affect or negative affect between conditions and no significant interactions (All Fs < 1, *ns*).

Additionally, the items that people listed were content analyzed for positivity by two independent coders who were unaware of the study's hypotheses. The coders were asked to rate each statement for how positive it was on a 5-point Likert scale (1 = "not at all positive" to 5"extremely positive"). The two coders' ratings correlated at α

[2] Though not included in the original predictions, a one-tailed contrast revealed that participants in the diagnostic/non-materialism condition (M = 1.36, SD = 1.29) significantly outperformed participants in the diagnostic/materialism condition (M = .81, SD = .83), t (1, 50) = -1.83, $p < 0.05$.

= .86 and so they were averaged to form a composite score. An ANOVA revealed non-significant main effects for materialism, F (1, 105) = 2.35, *ns,* and threat condition, $F < 1$, *ns*, nor did it reveal a significant interaction, $F < 1$, *ns.* The content analysis of participants' written statements confirmed their PANAS-X responses in that positive affect did not differ significantly in the materialism conditions and therefore is not responsible for the pattern of creative performance found in this study.

Discussion

As aforementioned, research has shown that stereotype threat can impair the performance of any individual for whom a situation calls for a stereotype-based expectation of impaired performance (Aronson et al., 1999; Schmader & Johns, 2003). The results of this study demonstrate that when individuals are expected to perform creatively, increased self-perceptions of materialism can impair their performance. In the series of findings presented, this study demonstrates that the bias against materialists can also influence the individual.

Future research may be conducted to further examine the materialism-creativity relationship and its influence on how individual performance. For example, some research has shown that the strength of one's group and/or domain identification is related to how vulnerable a person may be to stereotype threat (e.g., Rosenthal & Crisp, 2006). Additionally, studies have also shown that making multiple social identities salient to the individual can reduce stereotype threat (e.g., Rydell,

McConnell & Beilock, 2009). It may be interesting to see how variance in self-perceptions of materialism and/or how strongly an individual identifies as a creative person affects the results found in this study. It would be interesting to see if these interventions produce similar positive effects with regard to the materialism-creativity bias.

CHAPTER 7

GENERAL DISCUSSION

The origins of this research stemmed from an important question about some factors that influence the processes that underlie subjective evaluations of creativity. There exists some evidence to suggest that prototypes of creative individuals influence the ways in which people decide who and what is creative such that individuals who appear to adhere to the prototype tend to receive higher evaluations of creativity (Elsbach & Kramer, 2003; Goncalo et al., 2010). The present research aimed to extend this work by showing that this effect could also occur in the opposite direction such that the impressions of nonprototypical characteristics resulted in lower ratings of creativity under evaluation. Furthermore, this work showed that the creative performance of individuals who are concerned about appearing nonprototypical might even be impaired. The four studies presented here supported these predictions and showed that individuals who are considered to be materialistic are indeed rated as less creative under evaluation, and that individuals who have higher self-perceptions of materialism performed worse on a diagnostic creative task compared to individuals who had lower self-perceptions of materialism.

THEORETICAL IMPLICATIONS

These results support the idea that people's implicit theories of creativity drive their definitions of creativity and ultimately affect how they judge others as well as themselves. This is exemplified in the results of Studies 1 and 2, where individuals

were given the exact, identical, creative stimulus to evaluate and yet found the materialistic designer to be less creative than the non-materialistic designer. The present research and related research may speak to some of the reasons why organizations have such trouble identifying creative ideas. Not only does the evaluation of creativity assume some inherent subjectivity, but also, the more objective criteria by which creativity can and should be judged (i.e., measures of novelty and usefulness) can actually be nullified in this context. In other words, perceiving a person to be materialistic can be a more powerful determinant of that person's evaluation than that person's actual work.

Furthermore, the present findings suggest that these implicit theories of creativity also affect the way individuals feel about their own creativity. Study 5 showed that individuals who were manipulated to feel more materialistic performed worse on the RAT when they were told the task was diagnostic of creativity. This result demonstrated people's awareness of a mismatch between creativity and materialism and some of the psychological consequences that can occur as a result of dealing with these conflicting identities. Again, the opportunities for missed creativity are significant. Creative ideas can be undermined because of interruptions in the creative process resulting from the fear of confirming a negative stereotype. Moreover, that fear is a legitimate one as shown by the results of Studies 1 – 4, confirming that, in fact, materialistic individuals were evaluated as being less creative. Taken together, these studies contribute new findings and also support the suggestion

of other researchers (Amabile, 1996; Elsbach & Kramer, 2003; Goncalo et al., 2010; Kasof, 1995; Sutton & Hargadon, 1996) that a more comprehensive understanding of the processes that underlie the subjective evaluation of creativity is necessary.

PRACTICAL IMPLICATIONS

There are also several important implications of these results for managing creativity in organizations. First, this work further emphasizes the many different obstacles blocking the accurate evaluation of creativity. Several researchers have made a point of highlighting the hazards of employing subjective methods of creative evaluation (Amabile, 1982; Kasof, 1995; Sutton & Hargadon, 1996). In the domain of empirical research, evaluations of creativity have been anchored by rigorous criteria such as consensus and expertise (Amabile, 1982); however, the vast majority of creative evaluations in organizations are executed without such checks and balances. On the whole, the likelihood for promoting the wrong ideas and overlooking the right ones seems to be high. By identifying a specific bias, particularly one as pertinent to the contemporary organization as materialism, managers can at least be aware of this tendency to discount the creativity of individuals who appear to be highly motivated by profit, and also try to find ways to evaluate creativity that reduce the direct influence of the creator(s) (e.g., blind review of proposals, etc.).

Another important implication concerns the management of the creative identity in the organization. Previous research has shown that creative professionals are concerned about and want to affirm their creative identities (Bain, 2005; Elsbach,

2009). In addition to these concerns, there is now evidence to suggest that certain challenges to the creative identity can result in performance decrements. When an individual feels that he or she is exhibiting nonprototypical characteristics, in this case materialism, the threat of being labeled as uncreative leads to worse performance on a creative task. This suggests that as creatives in organizations are rewarded for their contributions, they may find themselves performing worse as the compensation for their creative work continues to increase. Such a result could truly undermine creativity in organizations. Knowing that such a phenomenon exists may be the first step toward addressing the complex identity of the creative professional in organizations. A second step may be to consider how certain psychological mechanisms, such as affirmations of the creative identity (Elsbach, 2009), can help mitigate some or all of this stereotype threat for members in organizations.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The scope of the current research only addresses one facet of materialism, namely, the prioritization of material wealth and possessions over other values. Future research may wish to focus on the consumer behaviors associated with materialism, such as conspicuous consumption. A great deal of existing research on materialism focuses on consumption and related manifestations of materialism, or displaying material values through the consumption of goods and services. That aspect of materialism is directly addressed in these studies, but should be investigated in future work. It may be the case that manipulating different aspects of materialism produce

differential results. Having a broader understanding of how materialism in its different manifestations affect evaluations of creativity and creative performance will be valuable to research conducted in both areas of materialism and creativity.

Another limitation of this work is a lack of insight into the actual thought process of participants as they evaluate others and themselves. Though these studies do not provide a great deal of information about how these decisions are made, they serve as a starting point for future work on this topic. For instance, in organizations, people are specifically sought out and paid for their creativity. It may be interesting to know, for instance, if and how individuals rationalize accepting payment for their work. Some work in sociology suggests that individuals do compartmentalize creative work and payment for creative work by symbolically distancing themselves from commercial success and maintaining the "purity" of some creative work for the self (Leschziner, 2007; Lindemann, 2010). These findings dovetail with Elsbach's (2009) study showing that toy designers in a corporate setting expressed their signature styles despite the additional effort involved and lack of additional compensation. As the demand for creativity in organizations continues to increase (Amabile, 1996; Florida, 2002; Oldham, 2002), it may be of greater importance to understand how individuals feel about earning money for their creative, and also how they are able to successfully maintain material gains and their creative identity.

In the first four studies, I chose creative stimuli that were vetted by multiple experts following the criteria of Amabile's Consensual Assessment Technique (1982).

It may be the case that increasing the ambiguity of the creative stimuli may also produce differences in the effects shown here. Indeed, almost all evaluations of creativity involve some degree of subjectivity (Amabile, 1982); however, it is worth investigating how bias works when the stimulus is more or less ambiguously creative. Investigating a more ambiguous stimulus would also increase practical application of this research to organizations where the evaluations of creativity also vary greatly.

CONCLUSION

Evaluations of creativity are unique in that the final product is one that is very closely associated with the person who created it. Creative professionals are attached to their work, and often reference their work as extensions of the self such that the distinction between the self and the work process and product becomes blurred (Csikszentmihalyi, 1996; Elsbach, 2009; Elsbach & Flynn, 2010; MacDonald & Wilson, 2005; Murnighan & Conlon, 1991). It may be argued that this lack of clear distinction between person and product is an important distinction in creative work in organizations (Elsbach & Kramer, 2003; Goncalo et al., 2010; Kasof, 1995). With regard to the creator and the creative product, information about one thing informs the evaluator about the other and vice versa. When considering subjective evaluations of creativity, it is clear that the creator is an essential source of information and potential bias in the process and also that the implicit theories held by people can influence the creative performance of others. As organizations continue investing in creative people, they should be aware of these effects and make efforts to create an environment that does not ignore or suppress the abilities of their members.

ENDNOTES

i. It may be of interest or perhaps concern that "usefulness" was chosen as a criterion to contrast with creativity because the definition of creativity used in organizational and psychological research includes usefulness (along with novelty). It is worth nothing that the questions asked in the current research specifically investigate the connotative definition(s) of creativity and the meanings that are prescribed to it by people in general, not only those who conduct empirical research. It could be suggested that materialism is influencing how individuals feel about creating novel things as these data showed that there was no conflict between being materialistic and creating something useful. It is also possible that when people think of creativity, they focus more on the aspect of novelty than on usefulness because they associate creativity with many objects that they do not necessarily consider useful (e.g., a sculpture). These implicit definitions and expectations of creativity are interesting and worth examining as they likely shape the evaluation and selection of creative people and ideas in organizations. Ultimately, "usefulness" was chosen instead of the word practical primarily to maintain face validity regarding the criterion of the contest. It seemed more likely that a contest would reward an individual for designing an *extremely useful* product rather than an *extremely practical* product and the descriptions had to match the language used in the creativity salience condition.

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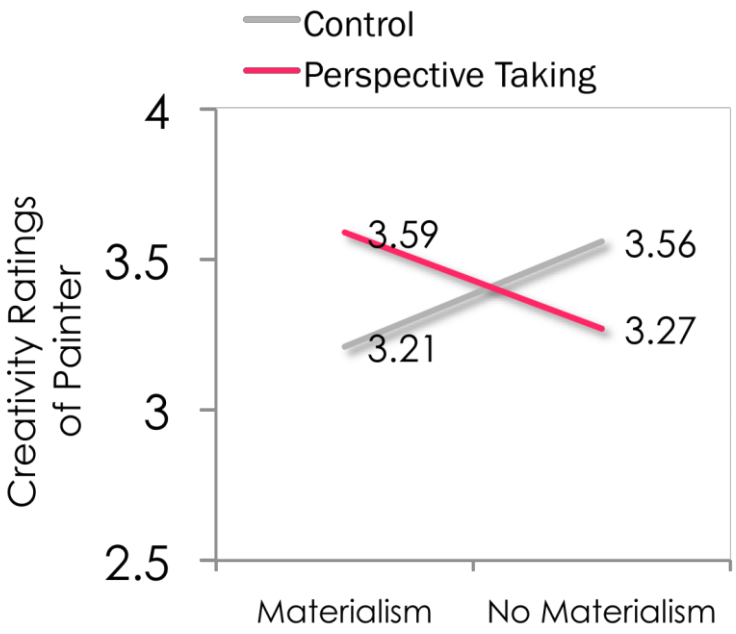
FIGURE 1

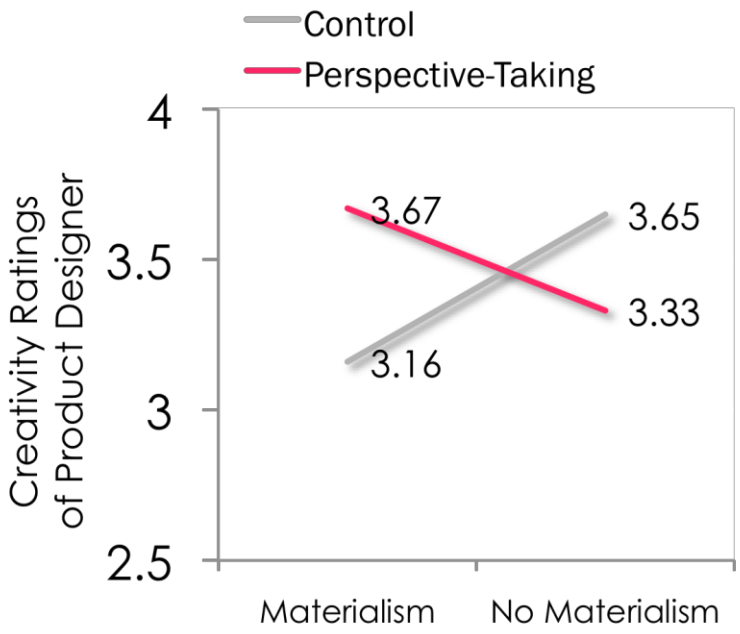
STUDY 1 RESULTS



Omnibus ANOVA:
Significant interaction F (1, 102) =6.09, $p < 0.05$
Control/Materialism vs. Control/Non-Materialism:
t(1, 55) = -2.12, $p < 0.05$

FIGURE 2

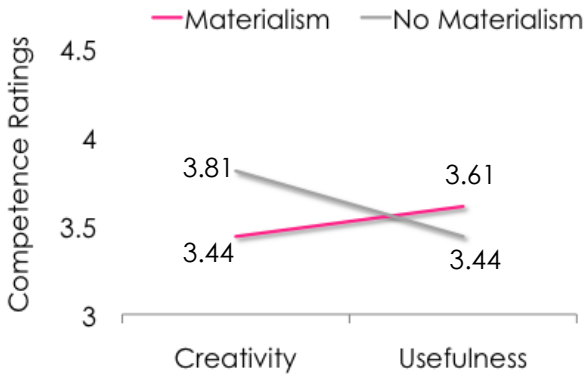
STUDY 2 RESULTS



Omnibus ANOVA:
Significant interaction $F(1, 93) = 4.10$, $p < 0.05$
Control/Materialism vs. Control/Non-Materialism:
$t(1, 42) = -2.07$, $p < 0.05$

FIGURE 3

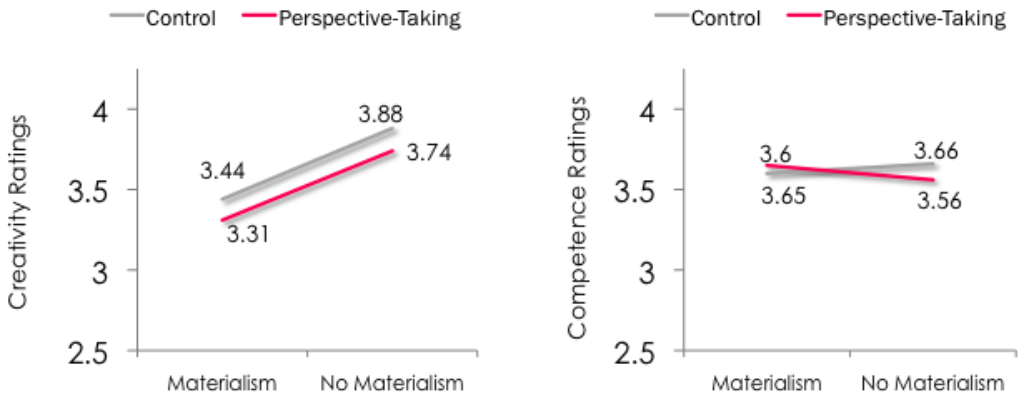
STUDY 3 RESULTS



Omnibus ANOVA: Significant interaction $F(1, 135) = 7.49$, $p < 0.01$
Materialism/Creativity vs. Non-Materialism/Creativity: $t(1, 60) = 2.51$, $p < 0.05$

FIGURE 4

STUDY 4 RESULTS



Omnibus ANOVA:
Significant main effect of materialism:
$F(1, 93) = 6.37$, $p < 0.025$
Control/Materialism vs. Control/Non-Materialism:
$t(1, 45) = -2.02$, $p < 0.05$.

Omnibus ANOVA:
All Fs < 1, *ns*

FIGURE 5

STUDY 4 EXPLORATORY ITEMS

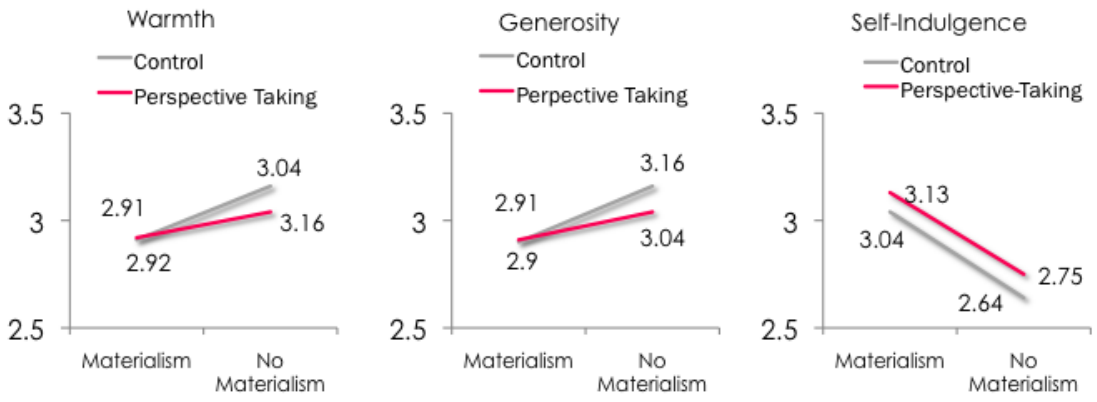
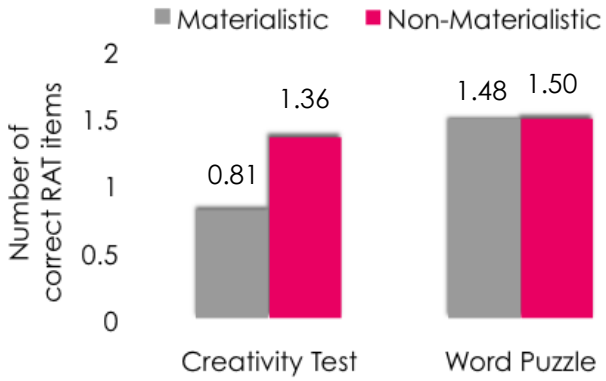


FIGURE 6

STUDY 5 RESULTS



Planned contrast: (3 conditions vs. Materialistic/Diagnostic): $F(1, 105) = 5.08$, $p < .05$
Planned contrast: (Material/Diagnostic vs. Material/Non-Diagnostic): $t(1, 53) = -2.16$, $p < .05$

TABLE 1

STUDY 5 RESULTS

TABLE 1: Study 5: Effects of materialism and diagnostic condition on creativity

	Materialism			
	Low		*High*	
	Creativity Test	*Word Puzzle*	*Creativity Test*	*Word Puzzle*
M	1.36	1.50	.81	1.48
SD	1.29	1.43	.83	1.40
95% *CI*	0.83 to 1.89	0.95 to 2.05	0.48 to 1.14	0.94 to 2.02

Note $n \approx 27$ per condition. Creative problem solving scores indicate the number of RAT items answered correctly; the scores range from 0 to 5.

APPENDIX A

STUDY 1: CREATIVITY STIMULUS

"Evil Eye" by Damon Johnson

(Image used with permission from Damon Johnson)

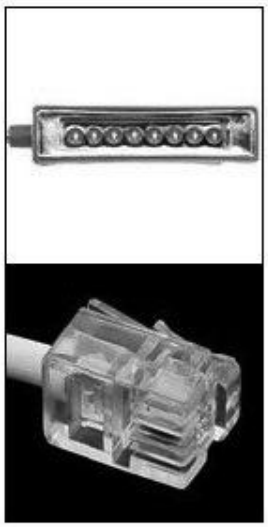
APPENDIX B

MATERIAL VALUES SCALE (9-ITEM VERSION) (RICHINS, 2004)

1. I admire people who own expensive homes, cars, and clothes.
2. The things I own say a lot about how well I'm doing in life.
3. I like to own things that impress people.
4. I try to keep my life simple, as far as possessions are concerned. (R)
5. Buying things gives me a lot of pleasure.
6. I like a lot of luxury in my life.
7. My life would be better if I owned certain things I don't have.
8. I'd be happier if I could afford to buy more things.
9. It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like.

APPENDIX C

CREATIVE STIMULUS



Description:

<u>The lamp that runs on electricity -- from the phone socket</u>

This lamp is so energy efficient its eight white LED lights are powered by the trickle of electricity flowing from a garden-variety telephone socket. This means that, even if the power is out, you can still enjoy some late night reading.

APPENDIX D

PANAS-X ITEMS (Watson & Clark, 1994)

Table 1 *Sample* PANAS-X *Protocol Illustrating "Past Few Weeks" Time Instructions*

This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt this way during the past few weeks. Use the following scale to record your answers:

1 very slightly or not at all	2 a little	3 moderately	4 quite a bit	5 extremely
_____ cheerful	_____ sad	_____ active		_____ angry at self
_____ disgusted	_____ calm	_____ guilty		_____ enthusiastic
_____ attentive	_____ afraid	_____ joyful		_____ downhearted
_____ bashful	_____ tired	_____ nervous		_____ sheepish
_____ sluggish	_____ amazed	_____ lonely		_____ distressed
_____ daring	_____ shaky	_____ sleepy		_____ blameworthy
_____ surprised	_____ happy	_____ excited		_____ determined
_____ strong	_____ timid	_____ hostile		_____ frightened
_____ scornful	_____ alone	_____ proud		_____ astonished
_____ relaxed	_____ alert	_____ jittery		_____ interested
_____ irritable	_____ upset	_____ lively		_____ loathing
_____ delighted	_____ angry	_____ ashamed		_____ confident
_____ inspired	_____ bold	_____ at ease		_____ energetic
_____ fearless	_____ blue	_____ scared		_____ concentrating
_____ disgusted with self	_____ shy	_____ drowsy		_____ dissatisfied with self

APPENDIX E

CORNELL UNIVERSITY IRB APPROVAL FOR STUDIES 1, 2, 3 & 4

Cornell University
Office of
Research Integrity and Assurance

East Hill Office Building, Suite 320
395 Pine Tree Road
Ithaca, NY 14850
p. 607-255-5138
f. 607-255-0758
www.irb.cornell.edu

Institutional Review Board for Human Participants

NOTICE OF EXPEDITED APPROVAL

To:	Sharon Kim
From:	Jenny Gerner, IRB Chairperson
Protocol ID#:	0908000782
Project(s):	Selling-Out of Creativity
Date of Approval:	September 23, 2009
Expiration Date:	September 22, 2010

The above-referenced protocol has been reviewed and given expedited approval by the Institutional Review Board for Human Participants (IRB) for the inclusion of human participants in research. **This approval shall remain in effect until September 22, 2010.**

The terms of Cornell University's Federalwide Assurance (FWA) with the federal government mandate the following important conditions for investigators:

1. All consent forms, records of study participation, and other consent materials **must** be held by the investigator for **five years** after the close of the study.
2. Investigators must submit to the IRB any **proposed amendment** to the study protocol, consent forms, interviews, recruiting strategies, and other materials. Investigators may not use these materials with human participants until the IRB has reviewed them. For information about study amendment procedures and access to the Amendments application form, please refer to the IRB website: http://www.irb.cornell.edu/forms.
3. Investigators must promptly report to the IRB any **unexpected events** involving human participants. The definition of prompt reporting depends upon the seriousness of the unexpected event. For guidance on recognizing, defining, and reporting unexpected events to the IRB, please refer to the IRB website: http://www.irb.cornell.edu/forms.

If the use of human participants is to continue beyond the assigned approval period, federal requirements mandate that the protocol be re-reviewed and receive an updated approval. **You may not continue to use information collected from human participants beyond the stated approval period without an updated approval.** Please note that the terms of our FWA with the federal government do not allow for an extension of this period without review. Continuing without an updated approval constitutes a violation of University policy and federal regulations. Research funds administered by the Office of Sponsored Programs will not be released to any project that does not have a current IRB approval.

Federal regulations require that all research be reviewed at least annually. As the Principal Investigator it is your responsibility to obtain review and continued approval *before* the expiration date. Applications for renewal of approval must be submitted sufficiently in advance of the expiration date to permit the IRB to conduct its review before the current approval expires. Please allow three weeks for the review.

APPENDIX F

CORNELL UNIVERSITY IRB APPROVAL FOR STUDY 4

Cornell University
Office of
Research Integrity and Assurance

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Ithaca, NY 14850
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Institutional Review Board for Human Participants

NOTICE OF EXPEDITED APPROVAL

To:	Sharon Kim
From:	Jenny Gerner, IRB Chairperson
Protocol ID#:	1002001172
Project(s):	Culture-Dependent Definitions of Selling-Out: A Study of Asian Americans
Date of Approval:	March 08, 2011
Expiration Date:	March 07, 2012

The above-referenced protocol has been reviewed and given expedited approval by the Institutional Review Board for Human Participants (IRB) for the inclusion of human participants in research. **This approval shall remain in effect until March 07, 2012.**

The following personnel are approved to perform research activities on your protocol:

- Sharon Kim
- Jack Goncalo

The terms of Cornell University's Federalwide Assurance (FWA) with the federal government mandate the following important conditions for investigators:

1. All consent forms, records of study participation, and other consent materials **must** be held by the investigator for **five years** after the close of the study.
2. Investigators must submit to the IRB any **proposed amendment** to the study protocol, consent forms, interviews, recruiting strategies, and other materials. Investigators may not use these materials with human participants until the IRB has reviewed them. For information about study amendment procedures and access to the Amendments application form, please refer to the IRB website: http://www.irb.cornell.edu/forms.
3. Investigators must promptly report to the IRB any **unexpected events** involving human participants. The definition of prompt reporting depends upon the seriousness of the unexpected event. For guidance on recognizing, defining, and reporting unexpected events to the IRB, please refer to the IRB website: http://www.irb.cornell.edu/forms.

If the use of human participants is to continue beyond the assigned approval period, federal requirements mandate that the protocol be re-reviewed and receive continuing approval. As the Principal Investigator it is your responsibility to obtain review and continued approval before the expiration date. Applications for renewal of approval must be submitted sufficiently in advance of the expiration date to permit the IRB to conduct its review before the current approval expires. Please allow three weeks for the review.

Any research-related activities -- including recruitment and/or consent of participants, research-related interventions, data collection, and analysis of identifiable data -- conducted during a period of lapsed approval is unapproved research and can never be reported or published as research data. If research-related activities occur during a lapse in the protocol approval, the activities become a research compliance issue and must be reported to the IRB via an unexpected event form (www.irb.cornell.edu/forms).

APPENDIX G

CORNELL UNIVERSITY IRB APPROVAL FOR STUDY 5

Cornell University
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Institutional Review Board for Human Participants

NOTICE OF EXPEDITED APPROVAL

To:	Sharon Kim
From:	Jenny Gerner, IRB Chairperson
Protocol ID#:	1002001158
Project(s):	The Threat of Selling-Out and Individual Creativity
Date of Approval:	March 10, 2010
Expiration Date:	March 09, 2011

The above-referenced protocol has been reviewed and given expedited approval by the Institutional Review Board for Human Participants (IRB) for the inclusion of human participants in research. **This approval shall remain in effect until March 09, 2011.**

The terms of Cornell University's Federalwide Assurance (FWA) with the federal government mandate the following important conditions for investigators:

1. All consent forms, records of study participation, and other consent materials **must** be held by the investigator for **five years** after the close of the study.
2. Investigators must submit to the IRB any **proposed amendment** to the study protocol, consent forms, interviews, recruiting strategies, and other materials. Investigators may not use these materials with human participants until the IRB has reviewed them. For information about study amendment procedures and access to the Amendments application form, please refer to the IRB website: http://www.irb.cornell.edu/forms.
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If the use of human participants is to continue beyond the assigned approval period, federal requirements mandate that the protocol be re-reviewed and receive an updated approval. **You may not continue to use information collected from human participants beyond the stated approval period without an updated approval**. Please note that the terms of our FWA with the federal government do not allow for an extension of this period without review. Continuing without an updated approval constitutes a violation of University policy and federal regulations. Research funds administered by the Office of Sponsored Programs will not be released to any project that does not have a current IRB approval.

Federal regulations require that all research be reviewed at least annually. As the Principal Investigator it is your responsibility to obtain review and continued approval ***before*** the expiration date. Applications for renewal of approval must be submitted sufficiently in advance of the expiration date to permit the IRB to conduct its review before the current approval expires. Please allow three weeks for the review.